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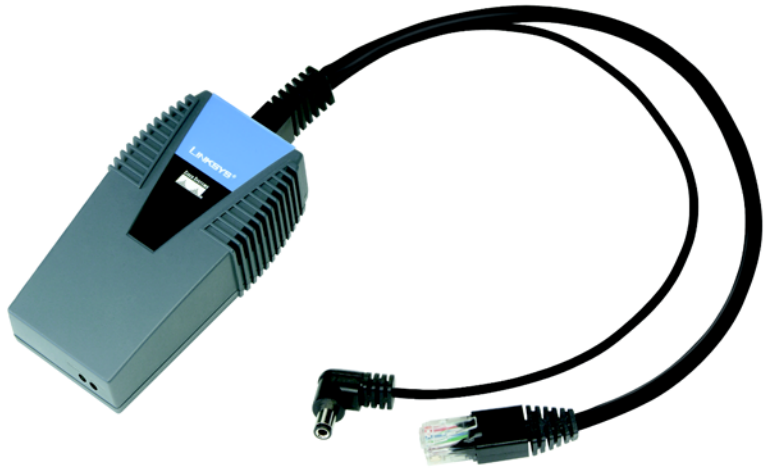

2.4GHz 802.11g

# Wireless-G

WIRELESS

## Bridge for Phone Adapters

# User Guide

Model No. WBP54G v2

CISCO SYSTEMS

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WARNING: This product contains chemicals, including lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. *Wash hands after handling.*

## How to Use This User Guide

This User Guide has been designed to make understanding networking with the Wireless-G Bridge for Phone Adapters easier than ever. Look for the following items when reading this User Guide:

This checkmark means there is a note of interest and is something you should pay special attention to while using the Wireless-G Bridge for Phone Adapters.

This exclamation point means there is a caution or warning and is something that could damage your property or the Wireless-G Bridge for Phone Adapters.

This question mark provides you with a reminder about something you might need to do while using the Wireless-G Bridge for Phone Adapters.

In addition to these symbols, there are definitions for technical terms that are presented like this:

*word: definition.*

Also, each figure (diagram, screenshot, or other image) is provided with a figure number and description, like this:

Figure 0-1: Sample Figure Description

Figure numbers and descriptions can also be found in the “List of Figures” section in the “Table of Contents”.

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# Chapter 1: Introduction

How does the Bridge do this? You can put your Linksys phone adapter or IP phone almost anywhere, without the cost and hassle of running network cables. The Bridge was specially designed to convert your phone adapter or IP phone into a wireless device, so it can connect to your home network without an Ethernet cable. This lets you put your phone where it's most convenient for you, and not be limited to the area around your Internet connection.

To make installation even more convenient, the Bridge shares electrical power with the phone adapter or IP phone, so only one power adapter is needed. To get connected, just plug your existing power adapter's power jack into the Bridge, and connect the power and data cables of the Bridge to the phone adapter or IP phone. The included Setup Wizard makes it easy to configure the Bridge for your wireless network. To protect your data and privacy, all wireless transmissions can be encrypted with WEP or industrial-strength, Wi-Fi Protected Access (WPA/WPA2) security.

But what does all of this mean?

Networks are useful tools for sharing computer resources. You can access one printer from different computers and access data located on another computer's hard drive. Networks are even used for playing multiplayer video games. So, networks are not only useful in homes and offices, they can also be fun.

PCs equipped with wireless cards and adapters can communicate without cumbersome cables. By sharing the same wireless settings, within their transmission radius, they form a wireless network.

The included Setup Wizard walks you through configuring the Bridge for your wireless network, step by step. Use the instructions in this Guide to help you set up and connect the Bridge as you run the Setup Wizard. These instructions should be all you need to get the most out of the Wireless-G Bridge for Phone Adapters.

*network: a series of computers or devices connected for the purpose of data sharing, storage, and/or transmission between users.*

*adapter: a device that adds network functionality to your PC.*

*802.11b: an IEEE wireless networking standard that specifies a maximum data transfer rate of 11Mbps and an operating frequency of 2.4GHz.*

*802.11g an IEEE wireless networking standard that specifies a maximum data transfer rate of 54Mbps and an operating frequency of 2.4GHz.*

## What's in This User Guide?

This user guide covers the steps for setting up and using the Wireless-G Bridge for Phone Adapters.

- Chapter 1: Introduction
  This chapter describes the Bridge's applications and this User Guide.
- Chapter 2: Planning Your Wireless Network
  This chapter discusses a few of the basics about wireless networking.
- Chapter 3: Getting to Know the Wireless-G Bridge for Phone Adapters
  This chapter describes the physical features of the Bridge.
- Chapter 4: Setting Up and Connecting the Wireless-G Bridge for Phone Adapters
  This chapter shows you how to set up and connect the Bridge.
- Appendix A: Troubleshooting
  This appendix describes some problems and solutions, as well as frequently asked questions, regarding installation and use of the Bridge.
- Appendix B: Wireless Security
  This appendix discusses security issues regarding wireless networking and measures you can take to help protect your wireless network.
- Appendix C: Windows Help
  This appendix describes how you can use Windows Help for instructions about networking, such as installing the TCP/IP protocol.
- Appendix D: Glossary
  This appendix gives a brief glossary of terms frequently used in networking.
- Appendix E: Specifications
  This appendix provides the Bridge's technical specifications.
- Appendix F: Warranty Information
  This appendix supplies the Bridge's warranty information.
- Appendix G: Regulatory Information
  This appendix supplies the Bridge's regulatory information.
- Appendix H: Contact Information
  This appendix provides contact information for a variety of Linksys resources, including Technical Support.

# Chapter 2: Planning Your Wireless Network

## Network Topology

A wireless network is a group of computers, each equipped with one wireless adapter. Computers in a wireless network must be configured to share the same radio channel. Several PCs equipped with wireless cards or adapters can communicate with one another to form an ad-hoc network.

Linksys wireless adapters also provide users access to a wired network when using an access point or wireless router. An integrated wireless and wired network is called an infrastructure network. Each wireless PC in an infrastructure network can talk to any computer in a wired network infrastructure via the access point or wireless router.

An infrastructure configuration extends the accessibility of a wireless PC to a wired network, and can double the effective wireless transmission range for two wireless adapter PCs. Since an access point is able to forward data within a network, the effective transmission range in an infrastructure network can be doubled.

*topology: the physical layout of a network.*

*ad-hoc: a group of wireless devices communicating directly with each other (peer-to-peer) without the use of an access point.*

*access point: a device that allows wireless-equipped computers and other devices to communicate with a wired network. Also used to expand the range of a wireless network*

*infrastructure: a wireless network that is bridged to a wired network via an access point.*

## Roaming

Infrastructure mode also supports roaming capabilities for mobile users. Roaming means that you can move your wireless PC within your network and the access points will pick up the wireless PC's signal, providing that they both share the same channel and SSID.

Before you consider enabling roaming, choose a feasible radio channel and optimum access point position. Proper access point positioning combined with a clear radio signal will greatly enhance performance.

*roaming: the ability to take a wireless device from one access point's range to another without losing the connection.*

*ssid: your wireless network's name.*

## Network Layout

Products using the 802.11g and 802.11b standards can communicate with each other.

Access points and wireless routers are compatible with 802.11b and 802.11g adapters, such as the notebook adapters for your laptop computers, PCI adapters for your desktop PCs, and USB adapters for when you want to enjoy USB connectivity. Wireless products will also communicate with a wireless print server.

Now with the Wireless-G Bridge for Phone Adapters, you can add wireless connectivity to your LInksys phone adapter or IP phone (compatible model numbers: PAP2, SPA1001, SPA2000, SPA2002, SPA3000, SPA2100, SPA841, SPA842, SPA941, SPA942, and SPA9000).

When you wish to connect your wired network with your wireless network, network ports on access points and wireless routers can be connected to any of Linksys's switches or routers.

With these, and many other, Linksys products, your networking options are limitless. Go to the Linksys website at *www.linksys.com* for more information about wireless products.

*switch: a data switch that connects computing devices to host computers, allowing a large number of devices to share a limited number of ports*

*router: a networking device that connects multiple networks together*

# Chapter 3: Getting to Know the Wireless-G Bridge for Phone Adapters

## Overview

The Bridge has two LEDs, a Power port, and a permanently attached cable.

## The LEDs

The Bridge has two LEDs to indicate network activity. (Not all versions of the Bridge have LEDS; however, all Bridges work the same, with or without LEDs.)

Ethernet — Green. The Ethernet LED lights up when the Bridge has an active connection to the wired network. It flashes when the Bridge is experiencing wired network activity. The LED is not lit when the Bridge has no active connection to the wired network.

Wireless — Green. The Wireless LED lights up when the Bridge is connected to the wireless network. It flashes when the Bridge is experiencing wireless network activity. The LED is not lit the Bridge is not connected via wireless.

Figure 3-1: LEDs

When the Bridge's firmware is being upgraded, the Ethernet and Wireless LEDs alternate flashing.

## The Port

The Bridge does not include its own power adapter; instead, it uses the power adapter of the Linksys phone adapter or IP phone.

Power — The Power port only supports a 5 V, 2 A, DC power adapter, which was included with your Linksys phone adapter or IP phone. Do NOT connect any other type of power adapter to the Bridge.

IMPORTANT: Using the wrong power adapter may cause malfunction or damage your equipment.

Figure 3-2: Power Port

## The Cable

The Bridge has a combination Ethernet network and power cable.

**Network** For setup, you will use the Ethernet network cable to connect the Bridge to your network router or PC running the Setup Wizard. After setup, you will use this cable to connect the Bridge to the Linksys phone adapter or IP phone.

**Power** After the Bridge has been configured, you will connect this cable to the Power port of the Linksys phone adapter or IP phone. One power adapter will power the Bridge, as well as the phone adapter or IP phone.

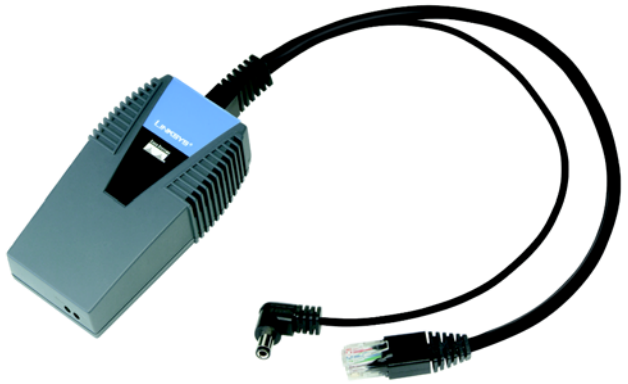

Figure 3-3: Combination Cable

# Chapter 4: Setting Up and Connecting the Wireless-G Bridge for Phone Adapters

**IMPORTANT: Do not connect the Bridge until you are instructed to do so or the setup will not work.**

## Starting the Setup Wizard

To begin the setup process, insert the Setup Wizard CD-ROM into your CD-ROM drive. The Setup Wizard should run automatically, and the *Welcome* screen should appear. If it does not, click the Start button and choose Run. In the field that appears, enter D:\setup.exe (if "D" is the letter of your CD-ROM drive).

On the *Welcome* screen, you have the following choices:

Click Here to Start or Setup - Click the Click Here to Start or Setup button to begin the software installation process.

User Guide - Click the User Guide button to open this User Guide.

Exit - Click Exit to exit the Setup Wizard.

## Running the Setup Wizard

1. To install the Bridge, click the Click Here to Start button on the *Welcome* screen.
2. After reading the License Agreement, click Next if you agree and want to continue the installation, or click Cancel to end the installation.

LINKSYS
A Division of Cisco Systems, Inc.
Welcome
Thank you for choosing Linksys. This Setup Wizard will help you install the Wireless-G Bridge for Phone Adapters
Click Here to Start
2.4GHz 802.11g Wireless-G
Bridge for Phone Adapters
Setup Wizard
Setup
User Guide
Exit
Model No. WBP54G
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Cisco Systems

Figure 4-1: Welcome Screen

LINKSYS
A Division of Cisco Systems, Inc.
End User License Agreement
1
Please review the license agreement below.
Press the PAGE DOWN key or use the Scroll Bar to see the rest of the agreement.
END-USER LICENSE AGREEMENT
FOR Linksys Wireless-G Bridge for Phone Adapters
IMPORTANT-READ CAREFULLY: This Linksys End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and Linksys Corporation for the Linksys software product identified above, which includes computer
software and may include associated media, printed materials, additional computer software applications, and "online" or electronic documentation ("SOFTWARE PRODUCT"). By downloading, installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA. If you do not agree to the
If you accept the terms of this Agreement, click Next to continue. If not, choose Cancel and the Setup Wizard will close. You must click Next to continue the installation process.
Cancel
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-2: License Agreement Screen

3. This screen will inform you about which Linksys phone adapters and IP phones work with the Bridge. Make sure your phone adapter or IP phone is listed on-screen. Click Next to proceed with the installation process, or click Back to return to the previous screen. To exit the Setup Wizard, click Exit.

NOTE: The power adapter for your Linksys phone adapter or IP phone will be used to power the Bridge.

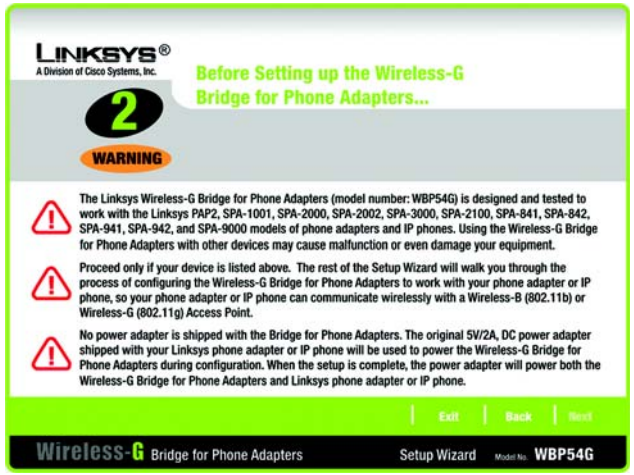

LINKSYS®
A Division of Cisco Systems, Inc.
Before Setting up the Wireless-G Bridge for Phone Adapters...
2
WARNING
The Linksys Wireless-G Bridge for Phone Adapters (model number: WBP54G) is designed and tested to work with the Linksys PAP2, SPA-1001, SPA-2000, SPA-2002, SPA-3000, SPA-2100, SPA-841, SPA-842, SPA-941, SPA-942, and SPA-9000 models of phone adapters and IP phones. Using the Wireless-G Bridge for Phone Adapters with other devices may cause malfunction or even damage your equipment.
Proceed only if your device is listed above. The rest of the Setup Wizard will walk you through the process of configuring the Wireless-G Bridge for Phone Adapters to work with your phone adapter or IP phone, so your phone adapter or IP phone can communicate wirelessly with a Wireless-B (802.11b) or Wireless-G (802.11g) Access Point.
No power adapter is shipped with the Bridge for Phone Adapters. The original 5V/2A, DC power adapter shipped with your Linksys phone adapter or IP phone will be used to power the Wireless-G Bridge for Phone Adapters during configuration. When the setup is complete, the power adapter will power both the Wireless-G Bridge for Phone Adapters and Linksys phone adapter or IP phone.
Exit
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-3: Check for Compatibility Screen

4. You will use the PC running this Setup Wizard to set up the Bridge. Disconnect the power jack from the back of the Linksys phone adapter or IP phone. (You will use this power adapter to power the Bridge.) If your network router or this PC is in a different room, disconnect the power adapter from the electrical outlet. Move the power adapter and Bridge to the room where your router or PC is located.

   Click Next to proceed, or click Back to return to the previous screen.

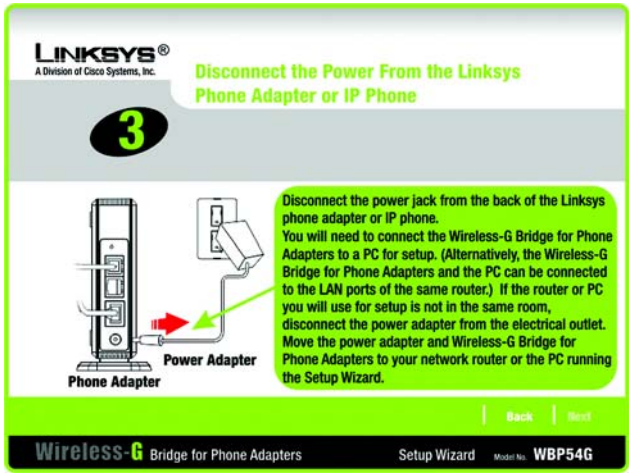

LINKSYS®
A Division of Cisco Systems, Inc.
Disconnect the Power From the Linksys Phone Adapter or IP Phone
3
Disconnect the power jack from the back of the Linksys phone adapter or IP phone.
You will need to connect the Wireless-G Bridge for Phone Adapters to a PC for setup. (Alternatively, the Wireless-G Bridge for Phone Adapters and the PC can be connected to the LAN ports of the same router.) If the router or PC you will use for setup is not in the same room, disconnect the power adapter from the electrical outlet. Move the power adapter and Wireless-G Bridge for Phone Adapters to your network router or the PC running the Setup Wizard.
Power Adapter
Phone Adapter
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-4: Disconnect the Power from the Phone Adapter or IP Phone Screen

5. Connect the power jack to the Power port of the Bridge. Then plug the power adapter into an electrical outlet.

   Click Next to proceed with the installation process, or click Back to return to the previous screen.

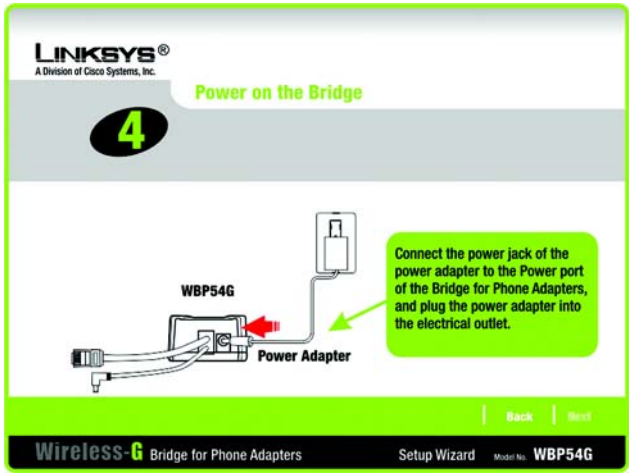

LINKSYS®
A Division of Cisco Systems, Inc.
Power on the Bridge
4
WBP54G
Power Adapter
Connect the power jack of the power adapter to the Power port of the Bridge for Phone Adapters, and plug the power adapter into the electrical outlet.
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-5: Power on the Bridge Screen

6. You will use the combination Ethernet network and power cable attached to the Bridge. Connect the Ethernet network cable of the Bridge to an Ethernet network (LAN) port of the router or PC. (Do not use the power cable now; you will use it later.)

   NOTE: If you connect the Bridge to a router, make sure the Bridge and PC running the Setup Wizard are connected to the Ethernet network (LAN) ports of the same router.

   Make sure the Bridge's Ethernet LED is solidly lit or flashing.

   Click Next to proceed, or click Back to return to the previous screen.

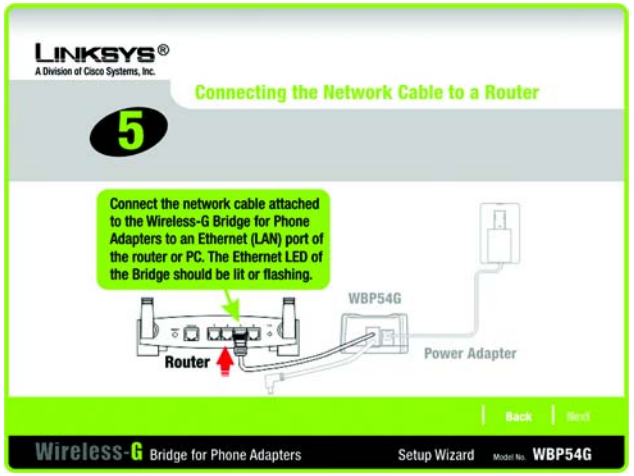

LINKSYS®
A Division of Cisco Systems, Inc.
Connecting the Network Cable to a Router
5
Connect the network cable attached to the Wireless-G Bridge for Phone Adapters to an Ethernet (LAN) port of the router or PC. The Ethernet LED of the Bridge should be lit or flashing.
WBP54G
Router
Power Adapter
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-6: Connecting the Network Cable to a Router Screen

7. A list of all Bridges for Phone Adapters that can be detected by the Setup Wizard will be displayed. Select the Bridge you are installing and click Next. If the Bridge you want is not displayed, click the Refresh List button to search again.

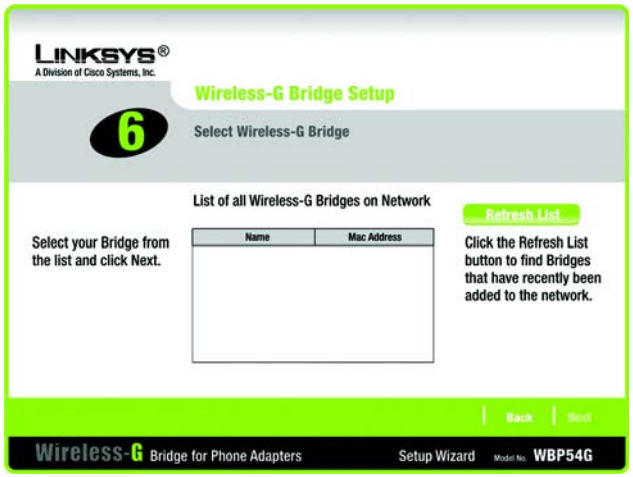



Figure 4-7: Wireless-G Bridge Setup Screen

8. This screen will display a list of wireless networks that can be detected and their status information: SSID (network name), MAC Address, Channel, Signal (strength), and Security (method). Select the wireless network you want.

   If the network you want is not displayed, click the Refresh List button to search again.

   To manually enter the SSID of the network you want, click the SSID radio button and complete the *SSID* field.

   IMPORTANT: Some wireless access points or routers do not broadcast their status information. If you do not see the network you want, click the SSID radio button and manually enter its SSID.

   Click Next to proceed, or click Back to return to the previous screen.

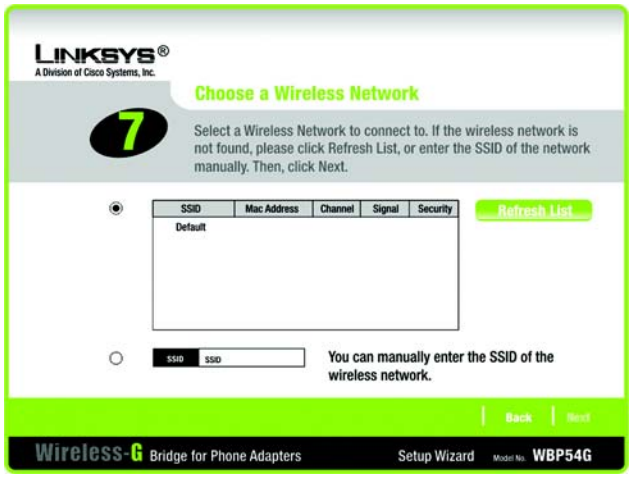



Figure 4-8: Choose a Wireless Network Screen

9. Configure the wireless security settings. Select the method your network is using, WPA, WPA2, WEP (128-Bit), or WEP (64-Bit). Then proceed to the appropriate instructions. If you are not using wireless security, select Disabled, and proceed to step 10.

   WPA

   WPA automatically uses TKIP with dynamic encryption keys. Enter a passphrase on this screen.

   Encryption - TKIP is automatically selected as the encryption method.

   Passphrase - Enter a Passphrase, also called a pre-shared key, of 8-63 characters in the *Passphrase* field. The longer and more complex your Passphrase is, the more secure your network will be.

   Click Next to proceed, or click Back to return to the previous screen.

   WPA2

   WPA2 automatically uses AES with dynamic encryption keys (AES is a stronger encryption method than TKIP). Enter a passphrase on this screen.

   Encryption - AES is automatically selected as the encryption method.

   Passphrase - Enter a Passphrase, also called a pre-shared key, of 8-63 characters in the *Passphrase* field. The longer and more complex your Passphrase is, the more secure your network will be.

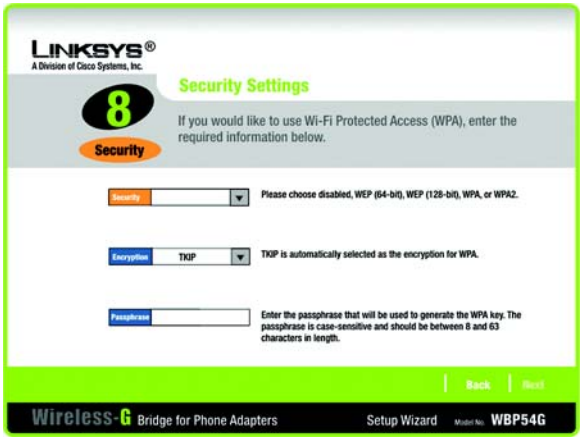
   Click Next to proceed, or click Back to return to the previous screen.

*encryption: encoding data transmitted in a network.*

*wpa (wi-fi protected access): a wireless security protocol using TKIP (Temporal Key Integrity Protocol) encryption.*

*wpa2 (wi-fi protected access 2): a wireless security protocol using AES (Advanced Encryption Standard) encryption.*

*wep (wired equivalent privacy): a method of encrypting network data transmitted on a wireless network.*


LINKSYS®
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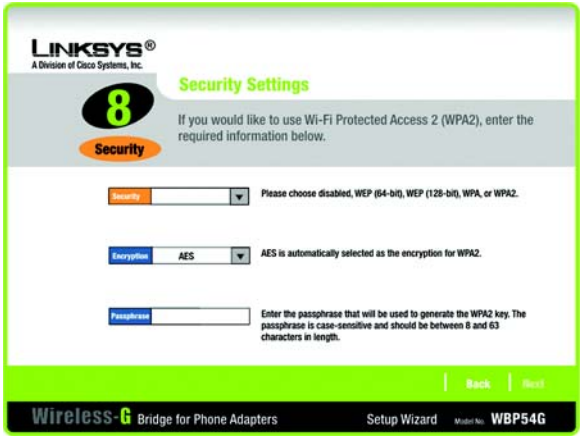
Security Settings
8
Security
If you would like to use Wi-Fi Protected Access (WPA), enter the required information below.
Please choose disabled, WEP (64-bit), WEP (128-bit), WPA, or WPA2.
Encryption
TKIP
TKIP is automatically selected as the encryption for WPA.
Passphrase
Enter the passphrase that will be used to generate the WPA key. The passphrase is case-sensitive and should be between 8 and 63 characters in length.
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
WBP54G

Figure 4-9: Security Settings - WPA Screen


LINKSYS®
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Security Settings
8
Security
If you would like to use Wi-Fi Protected Access 2 (WPA2), enter the required information below.
Please choose disabled, WEP (64-bit), WEP (128-bit), WPA, or WPA2.
Encryption
AES
AES is automatically selected as the encryption for WPA2.
Passphrase
Enter the passphrase that will be used to generate the WPA2 key. The passphrase is case-sensitive and should be between 8 and 63 characters in length.
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
WBP54G

Figure 4-10: Security Settings - WPA2 Screen

WEP (128-Bit) or WEP (64-Bit)

Enter a passphrase in the *Passphrase* field and click Next. If you want to manually enter a WEP key, leave the *Passphrase* field blank and click Next.

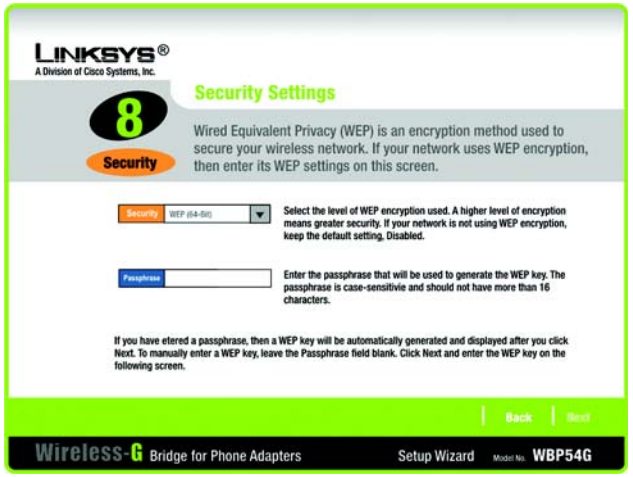
Passphrase - Enter a passphrase in the *Passphrase* field, so a WEP key is automatically generated. The passphrase is case-sensitive and should not be longer than 16 alphanumeric characters. It must match the passphrase of your other wireless network devices and is compatible with Linksys wireless products only. (If you have any non-Linksys wireless products, enter the WEP key manually on those products.)

A new screen will appear. If you entered a Passphrase, the WEP key(s) will be displayed. If you did not enter a Passphrase, enter the WEP key(s) on this screen. Then select the key you will use from the *Key Index* drop-down menu.

Key 1-4 - One to four fields will be displayed, depending on the level of encryption you have selected. The WEP key you enter must match the WEP key of your wireless network. For 64-bit WEP encryption, enter exactly 10 hexadecimal characters. For 128-bit WEP encryption, enter exactly 26 hexadecimal characters. Valid hexadecimal characters are “0” to “9” and “A” to “F”.

Key Index - The default transmit key number is 1. If your network’s access point or wireless router uses transmit key number 2, 3, or 4, select the appropriate number from the *Key Index* drop-down menu.

Click Next to proceed, or click Back to return to the previous screen.


LINKSYS®
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Security Settings
8
Security
Wired Equivalent Privacy (WEP) is an encryption method used to secure your wireless network. If your network uses WEP encryption, then enter its WEP settings on this screen.
Security
WEP (64-Bit)
Select the level of WEP encryption used. A higher level of encryption means greater security. If your network is not using WEP encryption, keep the default setting, Disabled.
Passphrase
Enter the passphrase that will be used to generate the WEP key. The passphrase is case-sensitivie and should not have more than 16 characters.
If you have etered a passphrase, then a WEP key will be automatically generated and displayed after you click Next. To manually enter a WEP key, leave the Passphrase field blank. Click Next and enter the WEP key on the following screen.
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-11: Security Settings - WEP (64-Bit) Screen

LINKSYS®
A Division of Cisco Systems, Inc.
Wireless-G Security Settings Continued (Optional)
9
If you had entered a passphrase on the previous screen, then the WEP key will be displayed on this screen.
Key 1
Key 2
Key 3
Key 4
Key Index
If you are manually entering the WEP key, enter 10 hexadecimal characters if you are using 64-bit WEP encryption. Enter 26 hexadecimal characters if you are using 128-bit WEP encryption. Vaild hexadecimal characters are "A" through "F" and numbers "0" and "9."
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-12: Security Settings - WEP Keys Screen

10. The new settings will be displayed. Review them before you proceed. Click Next to save your new settings, or click Back to return to the previous screen.

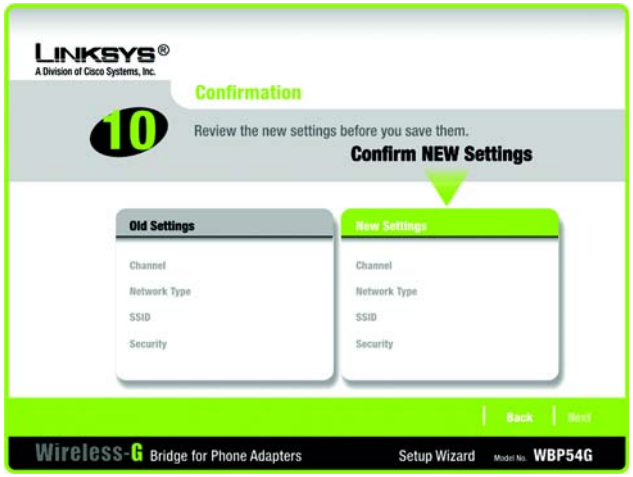



Figure 4-13: Confirmation Screen

11. The Bridge will attempt to connect to the wireless network using the new settings.

    Make sure the Bridge's Wireless LED is solidly lit or flashing. This indicates that the Bridge has connected to the wireless network. If the attempt succeeds, proceed to step 12.

    If the attempt fails, you have two options offered by a pop-up screen. Click the Yes button to save the new settings and proceed, or click the No button to return to the *Choose a Wireless Network* screen and reconfigure the settings.

Cannot connect to the wireless network. Click Yes to save the setting and proceed, or click No to return to Choose a Wireless Network screen to reconfigure the setting.
Yes
No

Figure 4-14: If the Bridge Does Not Connect... Screen

12. Disconnect the Ethernet network cable of the Bridge from the router or PC.

    Click Next to proceed, or click Back to return to the previous screen.

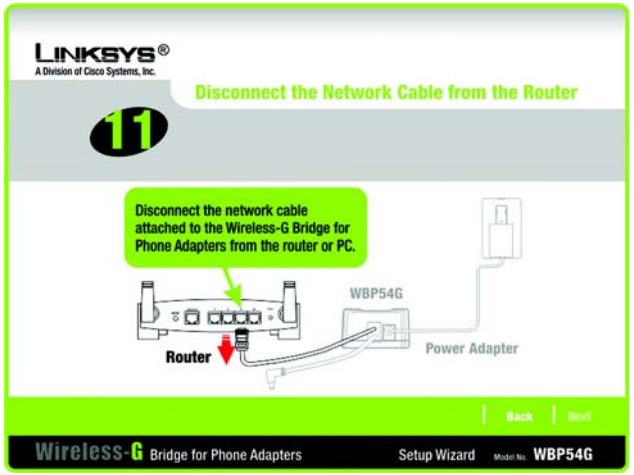



Figure 4-15: Disconnect the Network Cable from the Router Screen

13. If the phone adapter or IP phone is in a different room, disconnect the power adapter from the electrical outlet. Move the power adapter and Bridge to the location of the phone adapter or IP phone.

    Click Next to proceed, or click Back to return to the previous screen.

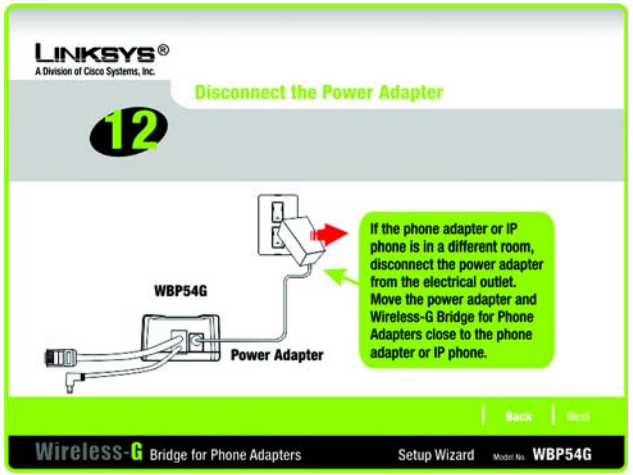

LINKSYS®
A Division of Cisco Systems, Inc.
Disconnect the Power Adapter
12
If the phone adapter or IP phone is in a different room, disconnect the power adapter from the electrical outlet. Move the power adapter and Wireless-G Bridge for Phone Adapters close to the phone adapter or IP phone.
WBP54G
Power Adapter
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-16: Disconnect the Power Adapter Screen

14. Disconnect the Ethernet network cable from the phone adapter or IP phone.

    You will use the combination Ethernet network and power cable attached to the Bridge. Connect the Ethernet network cable of the Bridge to the phone adapter or IP phone.

    Click Next to proceed, or click Back to return to the previous screen.

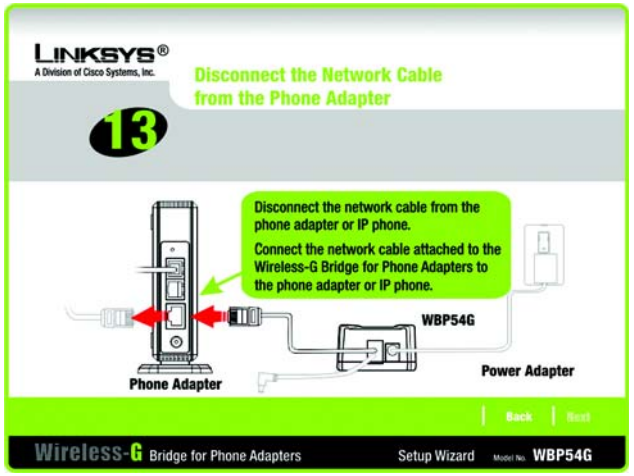

LINKSYS®
A Division of Cisco Systems, Inc.
Disconnect the Network Cable from the Phone Adapter
13
Disconnect the network cable from the phone adapter or IP phone.
Connect the network cable attached to the Wireless-G Bridge for Phone Adapters to the phone adapter or IP phone.
WBP54G
Power Adapter
Phone Adapter
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-17: Disconnect the Network Cable from the Phone Adapter Screen

15. Connect the power cable of the Bridge to the Power port of the phone adapter or IP phone. Then connect the power adapter to an electrical outlet.

    Make sure the Bridge's Ethernet and Wireless LEDs are solidly lit or flashing.

    Click Next to proceed, or click Back to return to the previous screen.

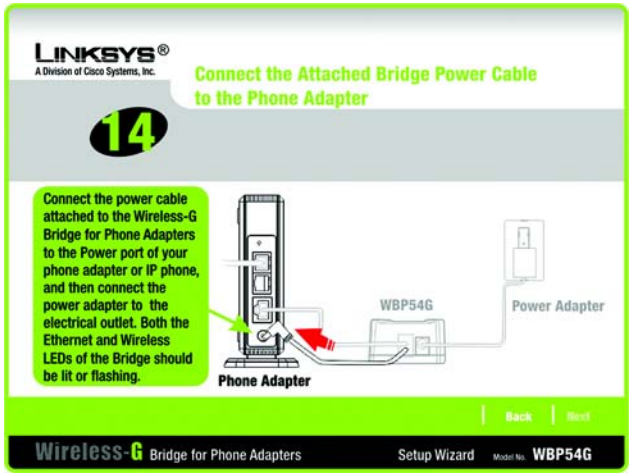

LINKSYS®
A Division of Cisco Systems, Inc.
Connect the Attached Bridge Power Cable to the Phone Adapter
14
Connect the power cable attached to the Wireless-G Bridge for Phone Adapters to the Power port of your phone adapter or IP phone, and then connect the power adapter to the electrical outlet. Both the Ethernet and Wireless LEDs of the Bridge should be lit or flashing.
WBP54G
Power Adapter
Phone Adapter
Back
Next
Wireless-G Bridge for Phone Adapters
Setup Wizard
Model No. WBP54G

Figure 4-18: Connect the Attached Bridge Power Cable to the Phone Adapter Screen

16. Make sure your cable connections match the cable connections shown on-screen.

    Click Next to proceed, or click Back to return to the previous screen.

Figure 4-19: Wireless is Now Active Screen

17. The *Congratulations* screen will appear. Click Exit to exit the Setup Wizard, or click Online Registration to register the Bridge at *www.linksys.com/registration*.

Congratulations! Setup is complete.

Figure 4-20: Congratulations Screen

# Appendix A: Troubleshooting

This appendix consists of two parts: "Common Problems and Solutions" and "Frequently Asked Questions." This appendix provides solutions to problems that may occur during the installation and operation of the Wireless-G Bridge for Phone Adapters. Read the description below to solve your problems. If you can't find an answer here, check the Linksys website at *www.linksys.com*.

## Common Problems and Solutions

1. *The Setup Wizard cannot detect the Wireless-G Bridge for Phone Adapters.*
   The Bridge cannot be configured over the wireless network. Confirm that the Bridge is properly connected to your network router or PC running the Setup Wizard. Make sure the Ethernet network cable is securely connected and the Ethernet LED should be solidly lit or flashing.

2. *The speed of the wireless connection is very slow.*
   If there is significant traffic ("noise") in your wireless environment, then the speed will drop. Make sure you have a clear line of sight between your wireless devices. Also, some electrical and electronic devices generate interference. You can often locate these by checking wireless data transmission speeds by powering on and off a different device, one at a time.

3. *The Linksys phone adapter or IP phone connected to the Bridge does not have a valid IP address.*
   This problem does not involve the Bridge (the Bridge only provides a connection between the wireless network and the phone adapter or IP phone). Make sure the phone adapter or IP phone has been configured properly, so that it is assigned a valid IP address. (The Bridge does not have its own IP address.)

4. *The Setup Wizard reported that the Bridge has successfully connected to the wireless network; however, the wireless connection does not seem to be working.*
   There may be an error with the Bridge's security settings. Make sure you have written down the correct settings for your wireless network. Then run the Setup Wizard for the Bridge. Check the following:
   - If your wireless network has its security enabled, make sure the WEP key and other settings you entered during the Bridge's Setup Wizard are correct.
   - If your wireless network has its security disabled, make sure no WEP key or other security setting was entered during the Bridge's Setup Wizard.

## Frequently Asked Questions

*Which Linksys products will the Bridge work with?*
The Bridge will work with these Linksys phone adapters and IP phones, listed by model number: PAP2, SPA1001, SPA2000, SPA2002, SPA3000, SPA2100, SPA841, SPA842, SPA941, SPA942, and SPA9000. Do not use the Bridge with any other products; otherwise, this may cause malfunction or even damage your equipment.

*The Bridge does not include a power adapter. How do I supply power to it?*
The Bridge uses the power adapter for your Linksys phone adapter or IP phone. A combination power and Ethernet network cable is attached to the Bridge. You will use the power adapter and this cable to power the Bridge and your Linksys phone adapter or IP phone. Refer to "Chapter 4: Setting Up and Configuring the Wireless-G Bridge for Phone Adapters" for instructions.

*What is the IEEE 802.11b standard?*
It is one of the IEEE standards for wireless networks. The 802.11b standard allows wireless networking hardware from different manufacturers to communicate, provided that the hardware complies with the 802.11b standard. The 802.11b standard states a maximum data transfer rate of 11Mbps and an operating frequency of 2.4GHz.

*What is the IEEE 802.11g standard?*
It is one of the IEEE standards for wireless networks. The 802.11g standard allows wireless networking hardware from different manufacturers to communicate, provided that the hardware complies with the 802.11g standard. The 802.11g standard states a maximum data transfer rate of 54Mbps and an operating frequency of 2.4GHz.

*What IEEE 802.11b features are supported?*
The product supports the following IEEE 802.11b functions:

- CSMA/CA plus Acknowledge protocol
- Multi-Channel Roaming
- Automatic Rate Selection
- RTS/CTS feature
- Fragmentation
- Power Management

*What IEEE 802.11g features are supported?*
The product supports the following IEEE 802.11g functions:

- CSMA/CA plus Acknowledge protocol
- OFDM protocol
- Multi-Channel Roaming
- Automatic Rate Selection
- RTS/CTS feature
- Fragmentation
- Power Management

*What is infrastructure mode?*
When a wireless network is set to infrastructure mode, the wireless network is configured to communicate with a wired network through a wireless access point.

*What is roaming?*
Roaming is the ability of a portable computer to communicate continuously while the user is moving freely throughout an area greater than that covered by a single access point. Before using the roaming function, the workstation must make sure that it is the same channel number with the access point of dedicated coverage area.

To achieve true seamless connectivity, the wireless LAN must incorporate a number of different functions. Each node and access point, for example, must always acknowledge receipt of each message. Each node must maintain contact with the wireless network even when not actually transmitting data. Achieving these functions simultaneously requires a dynamic RF networking technology that links access points and nodes. In such a system, the user's end node undertakes a search for the best possible access to the system. First, it evaluates such factors as signal strength and quality, as well as the message load currently being carried by each access point and the distance of each access point to the wired backbone. Based on that information, the node next selects the right access point and registers its address. Communications between end node and host computer can then be transmitted up and down the backbone.

As the user moves on, the end node's RF transmitter regularly checks the system to determine whether it is in touch with the original access point or whether it should seek a new one. When a node no longer receives acknowledgment from its original access point, it undertakes a new search. Upon finding a new access point, it then re-registers, and the communication process continues.

*What is the ISM band?*
The FCC and their counterparts outside of the U.S. have set aside bandwidth for unlicensed use in the ISM (Industrial, Scientific and Medical) band. Spectrum in the vicinity of 2.4 GHz, in particular, is being made available

worldwide. This presents a truly revolutionary opportunity to place convenient high-speed wireless capabilities in the hands of users around the globe.

*What is Spread Spectrum?*

Spread Spectrum technology is a wideband radio frequency technique developed by the military for use in reliable, secure, mission-critical communications systems. It is designed to trade off bandwidth efficiency for reliability, integrity, and security. In other words, more bandwidth is consumed than in the case of narrowband transmission, but the trade-off produces a signal that is, in effect, louder and thus easier to detect, provided that the receiver knows the parameters of the spread-spectrum signal being broadcast. If a receiver is not tuned to the right frequency, a spread-spectrum signal looks like background noise. There are two main alternatives, Direct Sequence Spread Spectrum (DSSS) and Frequency Hopping Spread Spectrum (FHSS).

*What is DSSS? What is FHSS? And what are their differences?*

Frequency-Hopping Spread-Spectrum (FHSS) uses a narrowband carrier that changes frequency in a pattern that is known to both transmitter and receiver. Properly synchronized, the net effect is to maintain a single logical channel. To an unintended receiver, FHSS appears to be short-duration impulse noise. Direct-Sequence Spread-Spectrum (DSSS) generates a redundant bit pattern for each bit to be transmitted. This bit pattern is called a chip (or chipping code). The longer the chip, the greater the probability that the original data can be recovered. Even if one or more bits in the chip are damaged during transmission, statistical techniques embedded in the radio can recover the original data without the need for retransmission. To an unintended receiver, DSSS appears as low power wideband noise and is rejected (ignored) by most narrowband receivers.

*Would the information be intercepted while transmitting on air?*

The Bridge features two-fold protection in security. On the hardware side, as with Direct Sequence Spread Spectrum technology, it has the inherent security feature of scrambling. On the software side, the Bridge offers a variety of security methods, including WEP and WPA, to enhance security and access control. For more information, refer to “Appendix B: Wireless Security.”

*What is WEP?*

WEP is Wired Equivalent Privacy, a data privacy mechanism based on a shared key algorithm, as described in the IEEE 802.11 standard. For more information, refer to “Appendix B: Wireless Security.”

*What is WPA?*

WPA is Wi-Fi Protected Access, a wireless security protocol that can be used in conjunction with a RADIUS (Remote Authentication Dial-In User Service) server. For more information, refer to “Appendix B: Wireless Security.”

# Appendix B: Wireless Security

Linksys wants to make wireless networking as safe and easy for you as possible. The current generation of Linksys products provide several network security features, but they require specific action on your part for implementation. So, keep the following in mind whenever you are setting up or using your wireless network.

## Security Precautions

The following is a complete list of security precautions to take (at least steps 1 through 5 should be followed):

1. Change the default SSID.
2. Disable SSID Broadcast.
3. Change the default password for the Administrator account.
4. Enable MAC Address Filtering.
5. Change the SSID periodically.
6. Use the highest encryption algorithm possible. Use WPA if it is available. Please note that this may reduce your network performance.
7. Change the encryption keys periodically.

NOTE: Some of these security features are available only through the network router or access point. Refer to the router or access point's documentation for more information.

## Security Threats Facing Wireless Networks

Wireless networks are easy to find. Hackers know that in order to join a wireless network, wireless networking products first listen for "beacon messages". These messages can be easily decrypted and contain much of the network's information, such as the network's SSID (Service Set Identifier). Here are the steps you can take:

Change the administrator's password regularly. With every wireless networking device you use, keep in mind that network settings (SSID, WEP keys, etc.) are stored in its firmware. Your network administrator is the only person who can change network settings. If a hacker gets a hold of the administrator's password, he, too, can change those settings. So, make it harder for a hacker to get that information. Change the administrator's password regularly.

SSID. There are several things to keep in mind about the SSID:

1. Disable Broadcast

2. Make it unique

3. Change it often

Most wireless networking devices will give you the option of broadcasting the SSID. While this option may be more convenient, it allows anyone to log into your wireless network. This includes hackers. So, don't broadcast the SSID.

Wireless networking products come with a default SSID set by the factory. (The Linksys default SSID is "linksys".) Hackers know these defaults and can check these against your network. Change your SSID to something unique and not something related to your company or the networking products you use.

Change your SSID regularly so that any hackers who have gained access to your wireless network will have to start from the beginning in trying to break in.

MAC Addresses. Enable MAC Address filtering. MAC Address filtering will allow you to provide access to only those wireless nodes with certain MAC Addresses. This makes it harder for a hacker to access your network with a random MAC Address.

WEP Encryption. Wired Equivalent Privacy (WEP) is often looked upon as a cure-all for wireless security concerns. This is overstating WEP's ability. Again, this can only provide enough security to make a hacker's job more difficult.

There are several ways that WEP can be maximized:

1. Use the highest level of encryption possible

2. Use "Shared Key" authentication

3. Change your WEP key regularly

IMPORTANT: Always remember that each device in your wireless network MUST use the same encryption method and encryption key or your wireless network will not function properly.

WPA. Wi-Fi Protected Access (WPA) is the newest and best available standard in Wi-Fi security. Two modes are available: WPA and WPA2. For encryption, WPA automatically uses Temporal Key Integrity Protocol (TKIP), which incorporates Message Integrity Code (MIC) to provide protection against hackers. WPA2-Personal only uses Advanced Encryption Standard (AES) encryption, which is stronger than TKIP and utilizes a symmetric 128-bit block data encryption.

WPA. Enter a password in the *Passphrase* field of 8-63 characters.

WPA2. Enter a password in the *Passphrase* field of 8-63 characters.

Implementing encryption may have a negative impact on your network's performance, but if you are transmitting sensitive data over your network, encryption should be used.

These security recommendations should help keep your mind at ease while you are enjoying the most flexible and convenient technology Linksys has to offer.

# Appendix C: Upgrading Firmware

To upgrade the Bridge's firmware, follow these instructions:

1. On a computer running Windows 2000 or XP, download the upgrade application (WBP54G Upgrade Application.zip) and the latest firmware from Linksys's website at *www.linksys.com*.

2. Extract the files on your computer's desktop. The unzipped firmware file is a .bin file, and the program to install the upgrade application is an .exe file named Upgrade 210. Their icons will appear on your desktop.

3. Double-click the Upgrade 210 icon to install the Upgrade Utility on your computer.

   If your computer is running Windows XP, you may see a security warning screen. Click the Run button to proceed.

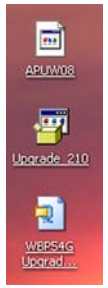



Figure C-1: Icons

Open File - Security Warning
The publisher could not be verified. Are you sure you want to run this software?
Name: Upgrade_210.exe
Publisher: Unknown Publisher
Type: Application
From: C:\Documents and Settings\Tom\Desktop
Run
Cancel
Always ask before opening this file
This file does not have a valid digital signature that verifies its publisher. You should only run software from publishers you trust.
How can I decide what software to run?

Figure C-2: Security Warning for Windows XP

4. The *Welcome* screen will appear. Click the Next button.

Welcome
Welcome to the Upgrade Utility Setup program. This program will install Upgrade Utility on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next >
Cancel

Figure C-3: Upgrade Utility Setup - Welcome

5. On the *Choose Destination Location* screen, click the Next button.

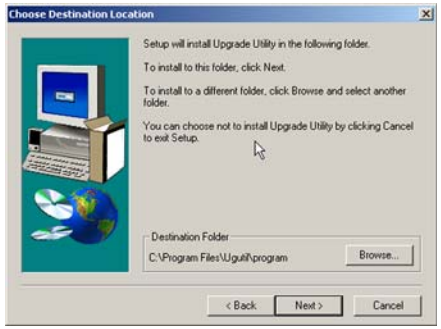

Choose Destination Location
Setup will install Upgrade Utility in the following folder.
To install to this folder, click Next.
To install to a different folder, click Browse and select another folder.
You can choose not to install Upgrade Utility by clicking Cancel to exit Setup.
Destination Folder
C:\Program Files\Ugutil\program
Browse...
< Back
Next >
Cancel

Figure C-4: Choose Destination Location

6. When the utility has been installed, a pop-up screen will appear. Click the OK button.

Figure C-5: Setup is Complete

7. A new window will appear on your desktop. You will use it later in step 9.

   Disconnect the Bridge's combination Ethernet network and power cable from the phone adapter or IP phone.

   If your PC is in a different room, disconnect the power adapter from the electrical outlet. Move the power adapter and Bridge to the location of your PC.

8. Connect the Ethernet network cable of the Bridge to an Ethernet network (LAN) port of the PC.

   If necessary, plug the power adapter into an electrical outlet.

9. In the new window on your desktop, double-click Upgrade Utility.

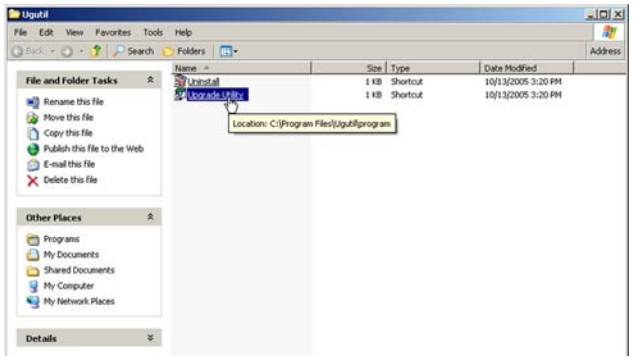



Figure C-6: Start Upgrade Utility Program

10. The *Upgrade Utility* screen will appear. Click Browse, and then click Browse Targets.

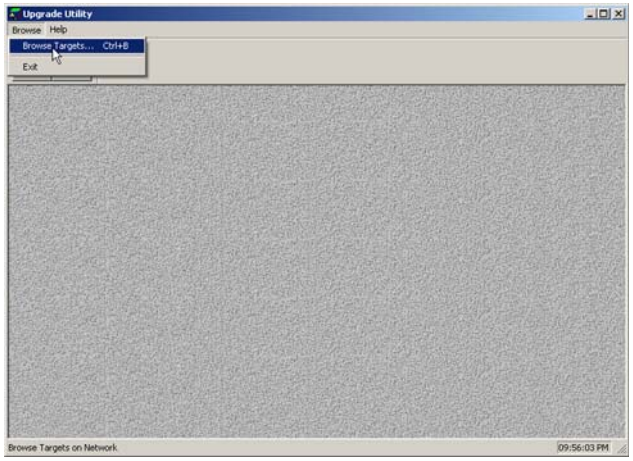



Figure C-7: Upgrade Utility - Browse Targets

11. The *Browsed Devices on Network* screen will appear. Click the Files button.

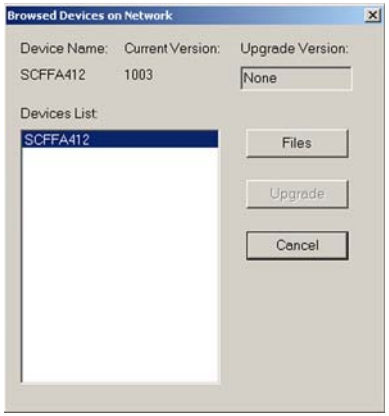



Figure C-8: Browsed Devices on Network Screen - Click Files

12. Select the extracted firmware file, and then click the Open button.

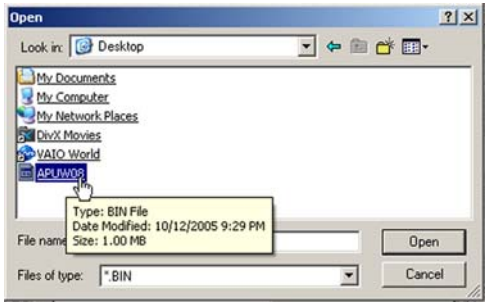



Figure C-9: Open Firmware File

13. The *BIN File Information* screen will appear. Click the OK button.

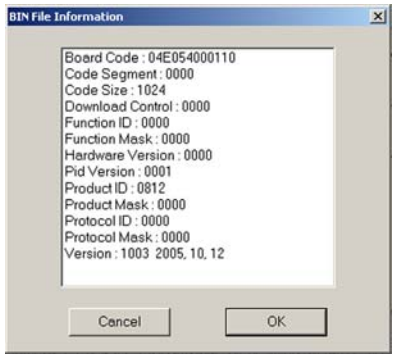



Figure C-10: BIN File Information Screen

14. On the *Browsed Devices on Network* screen, select the Bridge from the Devices List, and click the Upgrade button.

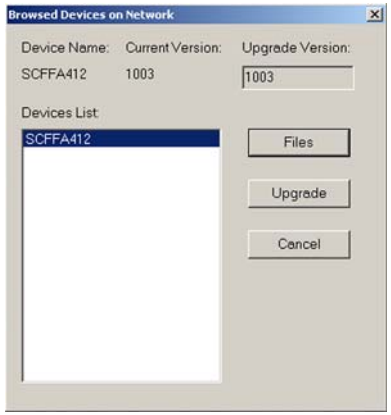



Figure C-11: Browsed Devices on Network Screen - Select Bridge

15. The Upgrade Utility will upgrade the Bridge's firmware. A pop-up screen will appear when the upgrade is complete. Click the OK button.

IMPORTANT: Do not disconnect the power adapter from the Bridge while the firmware is being upgraded. Otherwise, damage may occur to the Bridge.

16. Disconnect the Ethernet network cable from the PC.

    If the phone adapter or IP phone is in a different room, disconnect the power adapter from the electrical outlet. Move the power adapter and Bridge to the location of the phone adapter or IP phone.

17. Connect the Ethernet network cable of the Bridge to the phone adapter or IP phone.

18. Connect the power cable of the Bridge to the Power port of the phone adapter or IP phone.

    If necessary, plug the power adapter into an electrical outlet.

Figure C-12: Upgrade Successful

# Appendix D: Windows Help

Almost all wireless products require Microsoft Windows. Windows is the most used operating system in the world and comes with many features that help make networking easier. These features can be accessed through Windows Help and are described in this appendix.

## TCP/IP

Before a computer can communicate with an access point or wireless router, TCP/IP must be enabled. TCP/IP is a set of instructions, or protocol, all PCs follow to communicate over a network. This is true for wireless networks as well. Your PCs will not be able to utilize wireless networking without having TCP/IP enabled. Windows Help provides complete instructions on enabling TCP/IP.

## Shared Resources

If you wish to share printers, folder, or files over your network, Windows Help provides complete instructions on utilizing shared resources.

## Network Neighborhood/My Network Places

Other PCs on your network will appear under Network Neighborhood or My Network Places (depending upon the version of Windows you're running). Windows Help provides complete instructions on adding PCs to your network.

# Appendix E: Glossary

This glossary contains some basic networking terms you may come across when using this product. For more advanced terms, see the complete Linksys glossary at http://www.linksys.com/glossary.

Access Point - A device that allows wireless-equipped computers and other devices to communicate with a wired network. Also used to expand the range of a wireless network.

Ad-hoc - A group of wireless devices communicating directly with each other (peer-to-peer) without the use of an access point.

AES (Advanced Encryption Standard) - A security method that uses symmetric 128-bit block data encryption.

Bandwidth - The transmission capacity of a given device or network.

Bit - A binary digit.

Boot - To start a device and cause it to start executing instructions.

Broadband - An always-on, fast Internet connection.

Browser - An application program that provides a way to look at and interact with all the information on the World Wide Web.

Byte - A unit of data that is usually eight bits long

Cable Modem - A device that connects a computer to the cable television network, which in turn connects to the Internet.

Daisy Chain - A method used to connect devices in a series, one after the other.

DDNS (Dynamic Domain Name System) - Allows the hosting of a website, FTP server, or e-mail server with a fixed domain name (e.g., www.xyz.com) and a dynamic IP address.

Default Gateway - A device that forwards Internet traffic from your local area network.

DHCP (Dynamic Host Configuration Protocol) - A networking protocol that allows administrators to assign temporary IP addresses to network computers by “leasing” an IP address to a user for a limited amount of time, instead of assigning permanent IP addresses.

DMZ (Demilitarized Zone) - Removes the Router's firewall protection from one PC, allowing it to be “seen” from the Internet.

DNS (Domain Name Server) - The IP address of your ISP's server, which translates the names of websites into IP addresses.

Domain - A specific name for a network of computers.

Download - To receive a file transmitted over a network.

DSL (Digital Subscriber Line) - An always-on broadband connection over traditional phone lines.

Dynamic IP Address - A temporary IP address assigned by a DHCP server.

EAP (Extensible Authentication Protocol) - A general authentication protocol used to control network access. Many specific authentication methods work within this framework.

Encryption - Encoding data transmitted in a network.

Ethernet - IEEE standard network protocol that specifies how data is placed on and retrieved from a common transmission medium.

Firewall - A set of related programs located at a network gateway server that protects the resources of a network from users from other networks.

Firmware - The programming code that runs a networking device.

FTP (File Transfer Protocol) - A protocol used to transfer files over a TCP/IP network.

Full Duplex - The ability of a networking device to receive and transmit data simultaneously.

Gateway - A device that interconnects networks with different, incompatible communications protocols.

Half Duplex - Data transmission that can occur in two directions over a single line, but only one direction at a time.

HTTP (HyperText Transport Protocol) - The communications protocol used to connect to servers on the World Wide Web.

Infrastructure - A wireless network that is bridged to a wired network via an access point.

IP (Internet Protocol) - A protocol used to send data over a network.

IP Address - The address used to identify a computer or device on a network.

IPCONFIG - A Windows 2000 and XP utility that displays the IP address for a particular networking device.

IPSec (Internet Protocol Security) - A VPN protocol used to implement secure exchange of packets at the IP layer.

ISP (Internet Service Provider) - A company that provides access to the Internet.

LAN - The computers and networking products that make up your local network.

MAC (Media Access Control) Address - The unique address that a manufacturer assigns to each networking device.

Mbps (MegaBits Per Second) - One million bits per second; a unit of measurement for data transmission.

NAT (Network Address Translation) - NAT technology translates IP addresses of a local area network to a different IP address for the Internet.

Network - A series of computers or devices connected for the purpose of data sharing, storage, and/or transmission between users.

Packet - A unit of data sent over a network.

Passphrase - Used much like a password, a passphrase simplifies the WEP encryption process by automatically generating the WEP encryption keys for Linksys products.

Ping (Packet INternet Groper) - An Internet utility used to determine whether a particular IP address is online.

POP3 (Post Office Protocol 3) - A standard mail server commonly used on the Internet.

Port - The connection point on a computer or networking device used for plugging in cables or adapters.

Power over Ethernet (PoE) - A technology enabling an Ethernet network cable to deliver both data and power.

PPPoE (Point to Point Protocol over Ethernet) - A type of broadband connection that provides authentication (username and password) in addition to data transport.

PPTP (Point-to-Point Tunneling Protocol) - A VPN protocol that allows the Point to Point Protocol (PPP) to be tunneled through an IP network. This protocol is also used as a type of broadband connection in Europe.

RADIUS (Remote Authentication Dial-In User Service) - A protocol that uses an authentication server to control network access.

RJ-45 (Registered Jack-45) - An Ethernet connector that holds up to eight wires.

Roaming - The ability to take a wireless device from one access point's range to another without losing the connection.

Router - A networking device that connects multiple networks together.

Server - Any computer whose function in a network is to provide user access to files, printing, communications, and other services.

SMTP (Simple Mail Transfer Protocol) - The standard e-mail protocol on the Internet.

SNMP (Simple Network Management Protocol) - A widely used network monitoring and control protocol.

SPI (Stateful Packet Inspection) Firewall - A technology that inspects incoming packets of information before allowing them to enter the network.

SSID (Service Set IDentifier) - Your wireless network's name.

Static IP Address - A fixed address assigned to a computer or device that is connected to a network.

Static Routing - Forwarding data in a network via a fixed path.

Subnet Mask - An address code that determines the size of the network.

Switch - 1. A data switch that connects computing devices to host computers, allowing a large number of devices to share a limited number of ports. 2. A device for making, breaking, or changing the connections in an electrical circuit.

TCP (Transmission Control Protocol) - A network protocol for transmitting data that requires acknowledgement from the recipient of data sent.

TCP/IP (Transmission Control Protocol/Internet Protocol) - A set of instructions PCs use to communicate over a network.

Telnet - A user command and TCP/IP protocol used for accessing remote PCs.

TFTP (Trivial File Transfer Protocol) - A version of the TCP/IP FTP protocol that has no directory or password capability.

Throughput - The amount of data moved successfully from one node to another in a given time period.

TKIP (Temporal Key Integrity Protocol) - a wireless encryption protocol that provides dynamic encryption keys for each packet transmitted.

Topology - The physical layout of a network.

TX Rate - Transmission Rate.

Upgrade - To replace existing software or firmware with a newer version.

Upload - To transmit a file over a network.

URL (Uniform Resource Locator) - The address of a file located on the Internet.

VPN (Virtual Private Network) - A security measure to protect data as it leaves one network and goes to another over the Internet.

WAN (Wide Area Network)- The Internet.

WEP (Wired Equivalent Privacy) - A method of encrypting network data transmitted on a wireless network for greater security.

WLAN (Wireless Local Area Network) - A group of computers and associated devices that communicate with each other wirelessly.

WPA (Wi-Fi Protected Access) - A wireless security protocol using TKIP (Temporal Key Integrity Protocol) encryption, which can be used in conjunction with a RADIUS server.

# Appendix F: Specifications

| | |
|---|---|
| Model | WBP54G |
| Standards | IEEE 802.3, IEEE 802.3u, IEEE 802.11b, IEEE 802.11g |
| Port | One 5V/2A DC power input port |
| LEDs | Ethernet and Wireless |
| Cabling Type | One combo-power/Ethernet cable attached to the device with DC power jack and RJ-45 Ethernet connector |
| # of Antennas | One internal Helix antenna |
| Connector Type | One combo-power/Ethernet cable attached to the device with DC power jack and RJ-45 Ethernet connector |
| RF Pwr (EIRP) in dBm | 13 ±1.5dBm (802.11g) / 17 ±1.5dBm (802.11b) |
| Antenna Gain in dBi | 1 dBi |
| Security Features | WPA2, WPA, WEP |
| WEP Key Bits | 64, 128 |
| Dimensions | 2.01" x 3.62" x 1.14"<br>(51 mm x 92 mm x 29 mm) |
| Unit Weight | 2.54 oz. (0.072 kg) |
| Power | External, 5V DC, 2.0A (Not included, use the power adapter shipped with Linksys phone adapter or IP phone products) |

| | |
|---|---|
| Certifications | FCC, CE, cUL, IC-03, Wi-Fi, WPA, WPA2 |
| Operating Temp. | 0° C to 40° C (32° F to 104° F) |
| Storage Temp. | -20° C to 70° C (-4° F to 158° F) |
| Operating Humidity | 10% to 85% Non-Condensing |
| Storage Humidity | 5% to 90% Non-Condensing |

# Appendix G: Warranty Information

LIMITED WARRANTY

Linksys warrants this Linksys hardware product against defects in materials and workmanship under normal use for the Warranty Period, which begins on the date of purchase by the original end-user purchaser and lasts for the period specified for this product at www.linksys.com/warranty. The internet URL address and the web pages referred to herein may be updated by Linksys from time to time; the version in effect at the date of purchase shall apply.

This limited warranty is non-transferable and extends only to the original end-user purchaser. Your exclusive remedy and Linksysf entire liability under this limited warranty will be for Linksys, at its option, to (a) repair the product with new or refurbished parts, (b) replace the product with a reasonably available equivalent new or refurbished Linksys product, or (c) refund the purchase price of the product less any rebates. Any repaired or replacement products will be warranted for the remainder of the original Warranty Period or thirty (30) days, whichever is longer. All products and parts that are replaced become the property of Linksys.

EXCLUSIONS AND LIMITATIONS

This limited warranty does not apply if: (a) the product assembly seal has been removed or damaged, (b) the product has been altered or modified, except by Linksys, (c) the product damage was caused by use with non.Linksys products, (d) the product has not been installed, operated, repaired, or maintained in accordance with instructions supplied by Linksys, (e) the product has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident, (f ) the serial number on the Product has been altered, defaced, or removed, or (g) the product is supplied or licensed for beta, evaluation, testing or demonstration purposes for which Linksys does not charge a purchase price or license fee.

ALL SOFTWARE PROVIDED BY LINKSYS WITH THE PRODUCT, WHETHER FACTORY LOADED ON THE PRODUCT OR CONTAINED ON MEDIA ACCOMPANYING THE PRODUCT, IS PROVIDED gAS ISh WITHOUT WARRANTY OF ANY KIND. Without limiting the foregoing, Linksys does not warrant that the operation of the product or software will be uninterrupted or error free. Also, due to the continual development of new techniques for intruding upon and attacking networks, Linksys does not warrant that the product, software or any equipment, system or network on which the product or software is used will be free of vulnerability to intrusion or attack. The product may include or be bundled with third party software or service offerings. This limited warranty shall not apply to such third party software or service offerings. This limited warranty does not guarantee any continued availability of a third party's service for which this product's use or operation may require.

TO THE EXTENT NOT PROHIBITED BY LAW, ALL IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE DURATION OF THE WARRANTY PERIOD. ALL OTHER EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF NON-INFRINGEMENT, ARE DISCLAIMED. Some jurisdictions do not allow

limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary by jurisdiction.

TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL LINKSYS BE LIABLE FOR ANY LOST DATA, REVENUE OR PROFIT, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, REGARDLESS OF THE THEORY OF LIABILITY (INCLUDING NEGLIGENCE), ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE THE PRODUCT (INCLUDING ANY SOFTWARE), EVEN IF LINKSYS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL LINKSYS' LIABILITY EXCEED THE AMOUNT PAID BY YOU FOR THE PRODUCT. The foregoing limitations will apply even if any warranty or remedy provided under this limited warranty fails of its essential purpose. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

OBTAINING WARRANTY SERVICE

If you have a question about your product or experience a problem with it, please go to www.linksys.com/support where you will find a variety of online support tools and information to assist you with your product. If the product proves defective during the Warranty Period, contact the Value Added Reseller (VAR) from whom you purchased the product or Linksys Technical Support for instructions on how to obtain warranty service. The telephone number for Linksys Technical Support in your area can be found in the product User Guide and at www.linksys.com. Have your product serial number and proof of purchase on hand when calling. A DATED PROOF OF ORIGINAL PURCHASE IS REQUIRED TO PROCESS WARRANTY CLAIMS. If you are requested to return your product, you will be given a Return Materials Authorization (RMA) number. You are responsible for properly packaging and shipping your product to Linksys at your cost and risk. You must include the RMA number and a copy of your dated proof of original purchase when returning your product. Products received without a RMA number and dated proof of original purchase will be rejected. Do not include any other items with the product you are returning to Linksys. Defective product covered by this limited warranty will be repaired or replaced and returned to you without charge. Customers outside of the United States of America and Canada are responsible for all shipping and handling charges, custom duties, VAT and other associated taxes and charges. Repairs or replacements not covered under this limited warranty will be subject to charge at Linksys' then-current rates.

TECHNICAL SUPPORT

This limited warranty is neither a service nor a support contract. Information about Linksys' current technical support offerings and policies (including any fees for support services) can be found at: www.linksys.com/support. This limited warranty is governed by the laws of the jurisdiction in which the Product was purchased by you. Please direct all inquiries to: Linksys, P.O. Box 18558, Irvine, CA 92623

# Appendix H: Regulatory Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE: FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. To maintain compliance with FCC RF exposure compliance requirements, please avoid direct contact to the transmitting antenna during transmitting.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

We declare that the product is limited in CH1~CH11 by specified firmware controlled in the USA.

Safety Notices

Caution: To reduce the risk of fire, use only No.26 AWG or larger telecommunication line cord.

Do not use this product near water, for example, in a wet basement or near a swimming pool.

Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

Industry Canada

The use of this device in a system operating either partially or completely outdoors may require the user to obtain a license for the system according to the Canadian regulations.

This device complies with Industry Canada ICES-003 and RSS210 rules.

IC Statement

Operation is subject to the following two conditions:

1. This device may not cause interference and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'utilisation de ce périphérique dans un système utilisé partiellement ou totalement en extérieur peut conduire l'utilisateur à l'obtention d'une licence pour ce système conformément aux règles en vigueur au Canada.

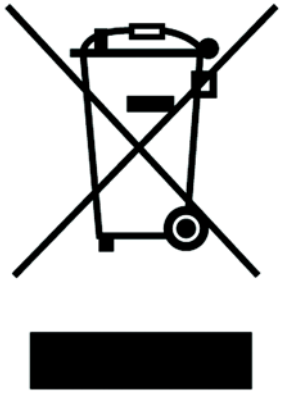
Cet appareil est conforme aux normes NMB-003 et RSS210 d'Industrie Canada.

Déclaration d'Industrie Canada

Le fonctionnement est soumis aux conditions suivantes :

1. Ce périphérique ne doit pas causer d'interférences;
2. Ce périphérique doit accepter toutes les interférences reçues, y compris celles qui risquent d'entraîner un fonctionnement indésirable.

**User Information for Consumer Products Covered by EU Directive 2002/96/EC on Waste Electric and Electronic Equipment (WEEE)**



**This document contains important information for users with regards to the proper disposal and recycling of Linksys products. Consumers are required to comply with this notice for all electronic products bearing the following symbol:**

### English

**Environmental Information for Customers in the European Union**

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

### Ceština/Czech

**Informace o ochraně životního prostředí pro zákazníky v zemích Evropské unie**

Evropská směrnice 2002/96/ES zakazuje, aby zařízení označené tímto symbolem na produktu anebo na obalu bylo likvidováno s netříděným komunálním odpadem. Tento symbol udává, že daný produkt musí být likvidován odděleně od běžného komunálního odpadu. Odpovídáte za likvidaci tohoto produktu a dalších elektrických a elektronických zařízení prostřednictvím určených sběrných míst stanovených vládou nebo místními úřady. Správná likvidace a recyklace pomáhá předcházet potenciálním negativním dopadům na životní prostředí a lidské zdraví. Podrobnější informace o likvidaci starého vybavení si laskavě vyžádejte od místních úřadů, podniku zabývajícího se likvidací komunálních odpadů nebo obchodu, kde jste produkt zakoupili.

**Dansk/Danish**

**Miljøinformation for kunder i EU**

EU-direktiv 2002/96/EF kræver, at udstyr der bærer dette symbol på produktet og/eller emballagen ikke må bortskaffes som usorteret kommunalt affald. Symbolet betyder, at dette produkt skal bortskaffes adskilt fra det almindelige husholdningsaffald. Det er dit ansvar at bortskaffe dette og andet elektrisk og elektronisk udstyr via bestemte indsamlingssteder udpeget af staten eller de lokale myndigheder. Korrekt bortskaffelse og genvinding vil hjælpe med til at undgå mulige skader for miljøet og menneskers sundhed. Kontakt venligst de lokale myndigheder, renovationstjenesten eller den butik, hvor du har købt produktet, angående mere detaljeret information om bortskaffelse af dit gamle udstyr.

**Deutsch/German**

**Umweltinformation für Kunden innerhalb der Europäischen Union**

Die Europäische Richtlinie 2002/96/EC verlangt, dass technische Ausrüstung, die direkt am Gerät und/oder an der Verpackung mit diesem Symbol versehen ist nicht zusammen mit unsortiertem Gemeindeabfall entsorgt werden darf. Das Symbol weist darauf hin, dass das Produkt von regulärem Haushaltmüll getrennt entsorgt werden sollte. Es liegt in Ihrer Verantwortung, dieses Gerät und andere elektrische und elektronische Geräte über die dafür zuständigen und von der Regierung oder örtlichen Behörden dazu bestimmten Sammelstellen zu entsorgen. Ordnungsgemäßes Entsorgen und Recyceln trägt dazu bei, potentielle negative Folgen für Umwelt und die menschliche Gesundheit zu vermeiden. Wenn Sie weitere Informationen zur Entsorgung Ihrer Altgeräte benötigen, wenden Sie sich bitte an die örtlichen Behörden oder städtischen Entsorgungsdienste oder an den Händler, bei dem Sie das Produkt erworben haben.

**Eesti/Estonian**

**Keskkonnaalane informatsioon Euroopa Liidus asuvatele klientidele**

Euroopa Liidu direktiivi 2002/96/EÜ nõuete kohaselt on seadmeid, millel on tootel või pakendil käesolev sümbol, keelatud kõrvaldada koos sorteerimata olmejäätmetega. See sümbol näitab, et toode tuleks kõrvaldada eraldi tavalistest olmejäätmevoogudest. Olete kohustatud kõrvaldama käesoleva ja ka muud elektri- ja elektroonikaseadmed riigi või kohalike ametiasutuste poolt ette nähtud kogumispunktide kaudu. Seadmete korrektne kõrvaldamine ja ringlussevõtt aitab vältida võimalikke negatiivseid tagajärgi keskkonnale ning inimeste tervisele. Vanade seadmete kõrvaldamise kohta täpsema informatsiooni saamiseks võtke palun ühendust kohalike ametiasutustega, jäätmekäitlusfirmaga või kauplusega, kust te toote ostsite.

**Español/Spanish**

**Información medioambiental para clientes de la Unión Europea**

La Directiva 2002/96/CE de la UE exige que los equipos que lleven este símbolo en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

**Ξλληνικά/Greek**

**Στοιχεία περιβαλλοντικής προστασίας για πελάτες εντός της Ευρωπαϊκής Ένωσης**

Η Κοινοτική Οδηγία 2002/96/EC απαιτεί ότι ο εξοπλισμός ο οποίος φέρει αυτό το σύμβολο στο προϊόν και/ή στη συσκευασία του δεν πρέπει να απορρίπτεται μαζί με τα μικτά κοινοτικά απορρίμματα. Το σύμβολο υποδεικνύει ότι αυτό το προϊόν θα πρέπει να απορρίπτεται ξεχωριστά από τα συνήθη οικιακά απορρίμματα. Είστε υπεύθυνος για την απόρριψη του παρόντος και άλλου ηλεκτρικού και ηλεκτρονικού εξοπλισμού μέσω των καθορισμένων εγκαταστάσεων συγκέντρωσης απορριμμάτων οι οποίες παρέχονται από το κράτος ή τις αρμόδιες τοπικές αρχές. Η σωστή απόρριψη και ανακύκλωση συμβάλλει στην πρόληψη πιθανών αρνητικών συνεπειών για το περιβάλλον και την υγεία. Για περισσότερες πληροφορίες σχετικά με την απόρριψη του παλιού σας εξοπλισμού, παρακαλώ επικοινωνήστε με τις τοπικές αρχές, τις υπηρεσίες απόρριψης ή το κατάστημα από το οποίο αγοράσατε το προϊόν.

### Français/French

**Informations environnementales pour les clients de l'Union européenne**

La directive européenne 2002/96/CE exige que l'équipement sur lequel est apposé ce symbole sur le produit et/ou son emballage ne soit pas jeté avec les autres ordures ménagères. Ce symbole indique que le produit doit être éliminé dans un circuit distinct de celui pour les déchets des ménages. Il est de votre responsabilité de jeter ce matériel ainsi que tout autre matériel électrique ou électronique par les moyens de collecte indiqués par le gouvernement et les pouvoirs publics des collectivités territoriales. L'élimination et le recyclage en bonne et due forme ont pour but de lutter contre l'impact néfaste potentiel de ce type de produits sur l'environnement et la santé publique. Pour plus d'informations sur le mode d'élimination de votre ancien équipement, veuillez prendre contact avec les pouvoirs publics locaux, le service de traitement des déchets, ou l'endroit où vous avez acheté le produit.

### Italiano/Italian

**Informazioni relative all'ambiente per i clienti residenti nell'Unione Europea**

La direttiva europea 2002/96/EC richiede che le apparecchiature contrassegnate con questo simbolo sul prodotto e/o sull'imballaggio non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche ed elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l'ambiente e per la salute dell'essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.

### Latviešu valoda/Latvian

**Ekoloģiska informācija klientiem Eiropas Savienības jurisdikcijā**

Direktīvā 2002/96/EK ir prasība, ka aprīkojumu, kam pievienota zīme uz paša izstrādājuma vai uz tā iesaiņojuma, nedrīkst izmest nešķirotā veidā kopā ar komunālajiem atkritumiem (tiem, ko rada vietēji iedzīvotāji un uzņēmumi). Šī zīme nozīmē to, ka šī ierīce ir jāizmet atkritumos tā, lai tā nenonāktu kopā ar parastiem mājsaimniecības atkritumiem. Jūsu pienākums ir šo un citas elektriskas un elektroniskas ierīces izmest atkritumos, izmantojot īpašus atkritumu savākšanas veidus un līdzekļus, ko nodrošina valsts un pašvaldību iestādes. Ja izmešana atkritumos un pārstrāde tiek veikta pareizi, tad mazinās iespējamais kaitējums dabai un cilvēku veselībai. Sīkākas ziņas par novecojuša aprīkojuma izmešanu atkritumos jūs varat saņemt vietējā pašvaldībā, atkritumu savākšanas dienestā, kā arī veikalā, kur iegādājāties šo izstrādājumu.

### Lietuvškai/Lithuanian

**Aplinkosaugos informacija, skirta Europos Sąjungos vartotojams**

Europos direktyva 2002/96/EC numato, kad įrangos, kuri ir (arba) kurios pakuotė yra pažymėta šiuo simboliu, negalima šalinti kartu su nerūšiuotomis komunalinėmis atliekomis. Šis simbolis rodo, kad gaminį reikia šalinti atskirai nuo bendro buitinių atliekų srauto. Jūs privalote užtikrinti, kad ši ir kita elektros ar elektroninė įranga būtų šalinama per tam tikras nacionalinės ar vietinės valdžios nustatytas atliekų rinkimo sistemas. Tinkamai šalinant ir perdirbant atliekas, bus išvengta galimos žalos aplinkai ir žmonių sveikatai. Daugiau informacijos apie jūsų senos įrangos šalinimą gali pateikti vietinės valdžios institucijos, atliekų šalinimo tarnybos arba parduotuvės, kuriose įsigijote tą gaminį.

### Malti/Maltese

**Informazzjoni Ambjentali għal Klijenti fl-Unjoni Ewropea**

Id-Direttiva Ewropea 2002/96/KE titlob li t-tagħmir li jkun fih is-simbolu fuq il-prodott u/jew fuq l-ippakkjar ma jistax jintrema ma' skart muniċipali li ma ġiex isseparat. Is-simbolu jindika li dan il-prodott għandu jintrema separatament minn ma' l-iskart domestiku regolari. Hija responsabbiltà tiegħek li tarmi dan it-tagħmir u kull tagħmir ieħor ta' l-elettriku u elettroniku permezz ta' faċilitajiet ta' ġbir appuntati apposta mill-gvern jew mill-awtoritajiet lokali. Ir-rimi b'mod korrett u r-riċiklaġġ jgħin jipprevjeni konsegwenzi negattivi potenzjali għall-ambjent u għas-saħħa tal-bniedem. Għal aktar informazzjoni dettaljata dwar ir-rimi tat-tagħmir antik tiegħek, jekk jogħġbok ikkuntattja lill-awtoritajiet lokali tiegħek, is-servizzi għar-rimi ta' l-iskart, jew il-ħanut minn fejn xtrajt il-prodott.

### Magyar/Hungarian

**Környezetvédelmi információ az európai uniós vásárlók számára**

A 2002/96/EC számú európai uniós irányelv megkívánja, hogy azokat a termékeket, amelyeken, és/vagy amelyek csomagolásán az alábbi címke megjelenik, tilos a többi szelektálatlan lakossági hulladékkal együtt kidobni. A címke azt jelöli, hogy az adott termék kidobásakor a szokványos háztartási hulladékelszállítási rendszerektől elkülönített eljárást kell alkalmazni. Az Ön felelőssége, hogy ezt, és más elektromos és elektronikus berendezéseit a kormányzati vagy a helyi hatóságok által kijelölt gyűjtőredszereken keresztül számolja fel. A megfelelő hulladékfeldolgozás segít a környezetre és az emberi egészségre potenciálisan ártalmas negatív hatások megelőzésében. Ha elavult berendezéseinek felszámolásához további részletes információra van szüksége, kérjük, lépjen kapcsolatba a helyi hatóságokkal, a hulladékfeldolgozási szolgálattal, vagy azzal üzlettel, ahol a terméket vásárolta.

**Nederlands/Dutch**

**Milieu-informatie voor klanten in de Europese Unie**

De Europese Richtlijn 2002/96/EC schrijft voor dat apparatuur die is voorzien van dit symbool op het product of de verpakking, niet mag worden ingezameld met niet-gescheiden huishoudelijk afval. Dit symbool geeft aan dat het product apart moet worden ingezameld. U bent zelf verantwoordelijk voor de vernietiging van deze en andere elektrische en elektronische apparatuur via de daarvoor door de landelijke of plaatselijke overheid aangewezen inzamelingskanalen. De juiste vernietiging en recycling van deze apparatuur voorkomt mogelijke negatieve gevolgen voor het milieu en de gezondheid. Voor meer informatie over het vernietigen van uw oude apparatuur neemt u contact op met de plaatselijke autoriteiten of afvalverwerkingsdienst, of met de winkel waar u het product hebt aangeschaft.

**Norsk/Norwegian**

**Miljøinformasjon for kunder i EU**

EU-direktiv 2002/96/EF krever at utstyr med følgende symbol avbildet på produktet og/eller pakningen, ikke må kastes sammen med usortert avfall. Symbolet indikerer at dette produktet skal håndteres atskilt fra ordinær avfallsinnsamling for husholdningsavfall. Det er ditt ansvar å kvitte deg med dette produktet og annet elektrisk og elektronisk avfall via egne innsamlingsordninger slik myndighetene eller kommunene bestemmer. Korrekt avfallshåndtering og gjenvinning vil være med på å forhindre mulige negative konsekvenser for miljø og helse. For nærmere informasjon om håndtering av det kasserte utstyret ditt, kan du ta kontakt med kommunen, en innsamlingsstasjon for avfall eller butikken der du kjøpte produktet.

**Polski/Polish**

**Informacja dla klientów w Unii Europejskiej o przepisach dotyczących ochrony środowiska**

Dyrektywa Europejska 2002/96/EC wymaga, aby sprzęt oznaczony symbolem znajdującym się na produkcie i/lub jego opakowaniu nie był wyrzucany razem z innymi niesortowanymi odpadami komunalnymi. Symbol ten wskazuje, że produkt nie powinien być usuwany razem ze zwykłymi odpadami z gospodarstw domowych. Na Państwu spoczywa obowiązek wyrzucania tego i innych urządzeń elektrycznych oraz elektronicznych w punktach odbioru wyznaczonych przez władze krajowe lub lokalne. Pozbywanie się sprzętu we właściwy sposób i jego recykling pomogą zapobiec potencjalnie negatywnym konsekwencjom dla środowiska i zdrowia ludzkiego. W celu uzyskania szczegółowych informacji o usuwaniu starego sprzętu, prosimy zwrócić się do lokalnych władz, służb oczyszczania miasta lub sklepu, w którym produkt został nabyty.

**Português/Portuguese**

**Informação ambiental para clientes da União Europeia**

A Directiva Europeia 2002/96/CE exige que o equipamento que exibe este símbolo no produto e/ou na sua embalagem não seja eliminado junto com os resíduos municipais não separados. O símbolo indica que este produto deve ser eliminado separadamente dos resíduos domésticos regulares. É da sua responsabilidade eliminar este e qualquer outro equipamento eléctrico e electrónico através dos instalações de recolha designadas pelas autoridades governamentais ou locais. A eliminação e reciclagem correctas ajudarão a prevenir as consequências negativas para o ambiente e para a saúde humana. Para obter informações mais detalhadas sobre a forma de eliminar o seu equipamento antigo, contacte as autoridades locais, os serviços de eliminação de resíduos ou o estabelecimento comercial onde adquiriu o produto.

**Slovenčina/Slovak**

**Informácie o ochrane životného prostredia pre zákazníkov v Európskej únii**

Podľa európskej smernice 2002/96/ES zariadenie s týmto symbolom na produkte a/alebo jeho balení nesmie byť likvidované spolu s netriedeným komunálnym odpadom. Symbol znamená, že produkt by sa mal likvidovať oddelene od bežného odpadu z domácností. Je vašou povinnosťou likvidovať toto i ostatné elektrické a elektronické zariadenia prostredníctvom špecializovaných zberných zariadení určených vládou alebo miestnymi orgánmi. Správna likvidácia a recyklácia pomôže zabrániť prípadným negatívnym dopadom na životné prostredie a zdravie ľudí. Ak máte záujem o podrobnejšie informácie o likvidácii starého zariadenia, obráťte sa, prosím, na miestne orgány, organizácie zaoberajúce sa likvidáciou odpadov alebo obchod, v ktorom ste si produkt zakúpili.

**Slovenčina/Slovene**

**Okoljske informacije za stranke v Evropski uniji**

Evropska direktiva 2002/96/EC prepoveduje odlaganje opreme, označene s tem simbolom – na izdelku in/ali na embalaži – med običajne, nerazvrščene odpadke. Ta simbol opozarja, da je treba izdelek odvreči ločeno od preostalih gospodinjskih odpadkov. Vaša odgovornost je, da to in preostalo električno in elektronsko opremo odnesete na posebna zbirališča, ki jih določijo državne ustanove ali lokalna uprava. S pravilnim odlaganjem in recikliranjem boste preprečili morebitne škodljive vplive na okolje in zdravje ljudi. Če želite izvedeti več o odlaganju stare opreme, se obrnite na lokalno upravo, odpad ali trgovino, kjer ste izdelek kupili.

**Suomi/Finnish**

**Ympäristöä koskevia tietoja EU-alueen asiakkaille**

EU-direktiivi 2002/96/EY edellyttää, että jos laitteistossa on tämä symboli itse tuotteessa ja/tai sen pakkauksessa, laitteistoa ei saa hävittää lajittelemattoman yhdyskuntajätteen mukana. Symboli merkitsee sitä, että tämä tuote on hävitettävä erillään tavallisesta kotitalousjätteestä. Sinun vastuullasi on hävittää tämä elektroniikkatuote ja muut vastaavat elektroniikkatuotteet viemällä tuote tai tuotteet viranomaisten määräämään keräyspisteeseen. Laitteiston oikea hävittäminen estää mahdolliset kielteiset vaikutukset ympäristöön ja ihmisten terveyteen. Lisätietoja vanhan laitteiston oikeasta hävitystavasta saa paikallisilta viranomaisilta, jätteenhävityspalvelusta tai siitä myymälästä, josta ostit tuotteen.

**Svenska/Swedish**

**Miljöinformation för kunder i Europeiska unionen**

Det europeiska direktivet 2002/96/EC kräver att utrustning med denna symbol på produkten och/eller förpackningen inte får kastas med osorterat kommunalt avfall Symbolen visar att denna produkt bör kastas efter att den avskiljts från vanligt hushållsavfall. Det faller på ditt ansvar att kasta denna och annan elektrisk och elektronisk utrustning på fastställda insamlingsplatser utsedda av regeringen eller lokala myndigheter. Korrekt kassering och återvinning skyddar mot eventuella negativa konsekvenser för miljön och personhälsa. För mer detaljerad information om kassering av din gamla utrustning kontaktar du dina lokala myndigheter, avfallshanteringen eller butiken där du köpte produkten.

For more information, visit www.linksys.com.

# Appendix I: Contact Information

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|---|---|
| Need to contact Linksys?<br>Visit us online for information on the latest products and updates to your existing products at: | http://www.linksys.com or<br>ftp.linksys.com |
| Can't find information about a product you want to buy on the web? Do you want to know more about networking with Linksys products? Give our advice line a call at: | 800-546-5797 (LINKSYS) |
| Or fax your request in to: | 949-823-3002 |
| If you experience problems with any Linksys product, you can call us at: | 800-326-7114 |
| Don't wish to call? You can e-mail us at: | support@linksys.com |
| If any Linksys product proves defective during its warranty period, you can call the Linksys Return Merchandise Authorization department for obtaining a Return Authorization Number at: (Details on Warranty and RMA issues can be found in the Warranty Information section in this Guide.) | 949-823-3000 |